adjustment pins, it is possible to securely maintain a focused position obtained by Twist Up operation.

The Twist Up device in the present invention does not require springs or other parts, and it can be manufactured with a simple change to the shape of the conventional Twist Up adjustment groove. So the manufacturing cost may be minimized. The Twist Up device of this invention can be appropriately reinforced, to improve durability, strength, and minimize wear to the Twist Up operation with the use variously selected material with the desired characteristics. Additionally, the present invention provides the user with a feel-response as it clicks into the desired position when the Twist Up adjustment pins move along to each pin stopping section.

PROVISIONAL CLAIMS

What is claimed is:

1. A Twist Up Device comprising a support ring having at least one adjustment pin that protrudes toward the outer circumference, at least one adjustment groove that holds said adjustment and allowing the adjustment pin to move in said adjustment groove, the support ring having a guidance grove, at least one ring moveably placed in said guidance groove so that said ring rotates around the outer circumference of the support ring, while letting the adjustment pins move in a set adjustment groove inside the said adjustment grooves, the Twist Up adjustment groove having at least one step.

2. A Twist Up device comprising a support ring having at least one Twist Up adjustment pin that protrudes toward the outer circumference, and at least one Twist Up adjustment groove that receives said Twist Up adjustment pin so as to allow the pin to move in a set adjustment groove, said Twist Up ring installed in the Twist Up device to allow said pin to move in the set groove around the outer circumference of the said support ring, while allowing the Twist Up adjustment pins move in a set groove inside the said Twist Up adjustment grooves, the Twist Up device comprising the following two components:

A pin-movement section, having one or more pins, that allows the Twist Up adjustment grooves to make the Twist Up adjustment pins to move in a set-groove direction.

The pin-stopping section installed next to the said pin-movement section to engage the above-mentioned Twist Up adjustment pins to prevent the said Twist Up ring from moving in a direction of the set movement groove.

3. The Twist Up device according to Claim 2, the pin-movement section being installed so that it extends diagonally from the first opening to the second opening of the Twist Up ring, and the pin-stopping section being installed in the direction from the end of the second opening of the above pin-movement section to the circumference perpendicular to the axis line of the Twist Up ring, or to the direction of the first opening.

4. The Twist Up device according to Claim 3, the Twist Up adjustment grooves comprising the following sections:

a first pin-movement section,

a first pin-stopping section that is set in the direction from the end of the second opening of the above pin-movement section to the above-mentioned first opening,

a second pin-movement section that is set in the direction from the end of the first opening of the first pin-stopping section to the second opening,

a second pin-stopping section that is set in the direction from the end of the second opening of the second pin-movement section to the first opening,

a third pin-movement section that is set in the direction from the end of the first opening of the pin-stopping section to the direction of the second opening, and

a third pin-stopping section that is set in the direction from the end of the second opening of the third pin-movement section to the circumference that is perpendicular to the axis line of the Twist Up ring.

5. The Twist Up device according to Claim 3, the Twist Up ring having an angled contact section to receive the Twist Up adjustment pin at the end of the pin-movement section from the opening side in the direction of extension from the end to the pin-movement section.

6. The Twist Up device according to Claim 4, the Twist Up ring having an angled contact section to receive the Twist Up adjustment pin at the end of the pin-movement section from the opening side in the direction of extension from the end to the pin-movement section.

7. The Twist Up device according to Claim 1, the support ring being disposed inside the inner circumference of the Twist Up ring and having resisting part that gives a required resistance force against the movement of the Twist Up ring when the Twist Up device is operated.

8. The Twist Up device according to Claim 2, the support ring being disposed inside the inner circumference of the Twist Up ring and having resisting part that gives a required resistance force against the movement of the Twist Up ring when the Twist Up device is operated.

9. The Twist Up device according to Claim 3, the support ring being disposed inside the inner circumference of the Twist Up ring and having resisting part that gives a required resistance force against the movement of the Twist Up ring when the Twist Up device is operated.

10. The Twist Up device according to Claim 4, the support ring being disposed inside the inner circumference of the Twist Up ring and having resisting part that gives a required resistance force against the movement of the Twist Up ring when the Twist Up device is operated.

11. The Twist Up device according to Claim 5, the support ring being disposed inside the inner circumference of the Twist Up ring and having resisting part that gives a required resistance force against the movement of the Twist Up ring when the Twist Up device is operated.

12. The Twist Up device according to Claim 6, the support ring being disposed inside the inner circumference of the Twist Up ring and having resisting part